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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/748,969

12/30/2003

Angel Stoyanov

25340

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28624 7590 11/14/2007  
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EXAMINER
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HAND, MELANIE JO

ART UNIT	PAPER NUMBER
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3761

NOTIFICATION DATE	DELIVERY MODE
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11/14/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@weyerhaeuser.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/748,969	STOYANOV ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Melanie J. Hand	3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7, 11-13 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No: \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

The claim status identifiers for claims 7, 11-13 and 18-20 listed in the amendment to the claims filed August 30, 2007 are incorrect. The identifiers should read "Withdrawn", not "Original".

### ***Response to Arguments***

Applicant's arguments filed August 30, 2007 have been fully considered but they are not persuasive.

With respect to arguments regarding the rejection of claims 1-6, 8, 9 and 14-17 as anticipated by or obvious over Hansen: Applicant argues that the Hansen reference does not disclose cellulose fibers reacted with an effective amount of crosslinking agent in the presence of an effective amount of C4-C12 polyol. This is not found persuasive. Hansen teaches polymeric and non-polymeric binders that have "a functional group that forms hydrogen bonds with the cellulose fibers". This forming of hydrogen bonds is considered herein to be a form of crosslinking. Chemical and/or physical crosslinking can occur via many different bonds or other links. It appears that applicant is referring to a preferred type of crosslinking that does not include hydrogen bonds that link a cellulose fiber to a binder, such type of crosslinking that specifically excludes hydrogen bonding was not claimed or disclosed. Applicant further argues that the crosslinking does not occur in the presence of a C4-C12 polyol. This is also not found persuasive because the non-polymeric binder comprises an organic binder having at least two functional groups wherein the functional group is an alcohol. Hansen explicitly discloses polyols, and since Hansen teaches a binder with at least two functional groups, this range overlaps the

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number of alcohol functional groups that applicant discloses as a requirement for a compound to be a polyol. Applicant defines polyol in the disclosure as having at least three alcohol functional groups. Further, for an organic binder to have at least two alcohol functional groups, there must be at least two carbon atoms, thus the number of "C"s is at least two. Thus, a polyol as taught by Hansen with at least two alcohol functional groups is at least a C2 polyol, which overlaps and encompasses the claimed C4-C12 polyol. It is noted that the rejection refers to the polymeric binders taught by Hansen. The rejection of claim 1 has been restated to refer to the non-polymeric binders instead. As to applicant's arguments that there is no reference to crosslinking of cellulose fibers in the presence of polyols to yield the claimed fiber color property, such property is an inherent property of the claimed product, and since it has been established by the office that the article of Hansen meets all of the claim limitations of claim 1 except for this inherent property, the article of Hansen also inherently teaches the claimed color property, i.e. whiteness index of greater than about 69.0. Applicant further argues that the fibers are not intrafiber crosslinked cellulosic fibers. This is not found persuasive. The following is cited from applicant's disclosure: "The cellulosic fibers are intrafiber crosslinked cellulosic fibers obtainable from cellulosic fibers by treatment with a crosslinking agent in the presence of a polyol." (Specification, Page 3, lines 23,24) Thus since the limitation directly responsible for creating intrafiber crosslinked cellulose fibers (i.e. treatment with a crosslinking agent in the presence of a polyol) are claimed and anticipated by Hansen, the fibers taught by Hansen are necessarily intrafiber crosslinked cellulose fibers. The fibers, again, inherently have a whiteness index of greater than 69.0 for reasons stated *supra*.

Applicant argues that the structure and composition of the reference is not even closely identical to that of the claims of the instant invention since the structure or composition in the reference is different from the instant invention and thus cannot have the inherent properties of

the invention. This is not found persuasive for at least the reason that it is a broad argument with no specific items or differences cited in support thereof. Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a specific structure or composition of the claimed invention) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicants arguments regarding dependent claims 2-6,8,9,1415,16 have been fully considered but are not persuasive as they depend upon applicant's arguments with respect to claim 1, addressed *supra*. Applicant's argument with respect to claims 5, 6 and 8 in particular does not appear to set forth an argument but appears to be just a statement of claimed subject matter.

As to applicant's arguments regarding claim 17, specifically that the drawings of Hansen do not disclose the claim limitations of claim 17, neither applicant nor the Office is permitted to rely solely on figures as a means to make or overcome a rejection. The entire disclosure of Hansen provides support for the Office's rejection of the claimed invention, and specific citations from the Hansen reference have been offered throughout the rejections.

With respect to arguments regarding the rejection of claim 10 as unpatentable over Hansen: Applicant argues that the Hansen reference does not suggest that the instant invention will improve whiteness index. As stated *supra* with respect to claim 1, the claimed whiteness index is an inherent property. Hansen teaches all of the remaining limitations except for the property and thus inherently teaches the property. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). It is not required of a reference in a rejection under 35 U.S.C. 103 that Hansen teach a motivation that is explicitly identical to that of the claimed invention, otherwise the rejection

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would be under 35 U.S.C. 102. Hansen teaches several at least C2 polyols as the instant non-polymeric binder, of which sorbitol is an example. Thus it would in fact be obvious with a reasonable expectation of success to modify the non-polymeric C2-or-higher polyol binder Of Hansen by replacing it with a specific C2-or-higher polyol, in this case sorbitol, with a reasonable expectation of success, as both the C2-or-higher polyol of Hansen and sorbitol meet the claim limitation of a C4-C12 polyol.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8, 9 and 14-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hansen et al (U.S. Patent No. 5,589,256).

With respect to **claim 1**: Hansen teaches an absorbent product comprising cellulosic fibers reacted with an effective amount of a crosslinking agent (a non-polymeric binder dispersed among cellulose fibers forming hydrogen bonds with the cellulose fibers, thus crosslinking them) in the presence of an effective amount of a C4-C12 polyol. The nonpolymeric binder is the crosslinking agent and comprises an organic binder having at least two alcohol functional groups, thus the binder is at least a C2 polyol. Thus Hansen teaches an absorbent product

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comprising cellulosic fibers reacted with an effective amount of crosslinking agent (the binder) in the presence of a C4-C12 polyol, which is present in the binder. The polyol of Hansen also conforms to applicant's definition of the term "polyol" in the disclosure. (Col. 3, lines 42-45, 62, Col. 23, lines 54-56, Col. 35, lines 35, 36) Because Hansen teaches all of the claim limitations, Hansen is necessarily also teaching intrafiber crosslinked cellulosic fibers as claimed (see Specification, page 3, lines 23, 24). When the structure or composition recited in the reference is substantially identical to that of the claims of the instant invention, claimed properties or functions presumed to be inherent (MPEP 2112-2112.01). A prima facie case of either anticipation or obviousness has been established when the reference discloses all the limitations of a claim (in this case, individualized intrafiber crosslinked cellulosic fibers reacted with effective amounts of polyol and crosslinking agent, as such amounts are defined in the claimed disclosure) except for a property or function (in the present case, a whiteness index) and the examiner can not determine whether or not the reference inherently possesses properties that anticipate or render obvious the claimed invention but has a basis for shifting the burden of proof to applicant, as per *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). characterized by a Whiteness Index,  $WI_{CDM-L}$ , greater than about 69.0. The absorbent product of Hansen anticipates the claimed product. Alternatively, it would be obvious to one of ordinary skill in the art to modify the absorbent product of Hansen so as to have a whiteness index in the claimed range with a reasonable expectation of success.

With respect to **claim 2**: The individualized intrafiber crosslinked cellulosic fibers inherently have an L value greater than about 94.5. The claimed L value is a function of the whiteness index as set forth in applicant's disclosure. Therefore an L value in the claimed range is also an inherent property of the claimed product and the product of Hansen. The basis for this inherency

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argument and basis for shifting burden of proof to the applicant is stated *supra* with respect to claim 1.

With respect to **claim 3**: The intrafiber crosslinked cellulosic fibers inherently have an "a" value greater than about -1.55 and less than about -0.60. The claimed "a" value is determined by the composition or the product which affects the product's color, and hence its "a" value, therefore an "a" value in the claimed range is also an inherent property of the claimed product and the product of Hansen. The basis for this inherency argument and basis for shifting burden of proof to the applicant is stated *supra* with respect to claim 1.

With respect to **claim 4**: The intrafiber crosslinked cellulosic fibers taught by Hansen inherently have a b value less than about 8.5. The claimed "b" value is a function of the whiteness index as set forth in the claimed disclosure. Therefore a "b" value in the claimed range is also an inherent property of the claimed product and the product of Hansen. The basis for this inherency argument and basis for shifting burden of proof to the applicant is stated *supra* with respect to claim 1.

With respect to **claims 5,6,8**: Hansen teaches that the crosslinking agent is citric acid, an  $\alpha$ -hydroxy polycarboxylic acid. (Col. 35, lines 35,36)

With respect to **claim 9**: The polyol is an acyclic polyol, namely pentaerythritol. (Col. 4, lines 5-7)



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With respect to **claim 14**: The intrafiber crosslinked cellulosic fibers inherently have a brightness greater than about 79.0% ISO brightness. When the structure or composition recited in the reference is substantially identical to that of the claims of the instant invention, claimed properties or functions presumed to be inherent (MPEP 2112-2112.01). A prima facie case of either anticipation or obviousness has been established when the reference discloses all the limitations of a claim (in this case, individualized intrafiber crosslinked cellulosic fibers reacted with effective amounts of polyol and crosslinking agent, as such amounts are defined in the claimed disclosure) except for a property or function (in the present case, a percent ISO brightness) and the examiner can not determine whether or not the reference inherently possesses properties that anticipate or render obvious the claimed invention but has a basis for shifting the burden of proof to applicant, as per *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). The absorbent product of Hansen anticipates the claimed product. Alternatively, it would be obvious to one of ordinary skill in the art to modify the absorbent product of Hansen so as to have a percent ISO brightness in the claimed range with a reasonable expectation of success.

With respect to **claim 15**: The product further comprises fluff pulp fibers. (Col. 23, lines 54-56)

With respect to **claim 16**: The product further comprises superabsorbent material. (Col. 23, lines 54-56)

With respect to **claim 17**: The product is an infant diaper. (Fig. 10)

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Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (U.S. Patent No. 5,589,256).

With respect to **claim 10**: Hansen teaches a C2-or-higher polyol (Col. 3, lines 58-62), but does explicitly teach sorbitol. However, since sorbitol is an example of a C2-or-higher polyol, it would be obvious to one of ordinary skill in the art to modify the fiber taught by Hansen such that the polyol added is sorbitol with a reasonable expectation of success.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on M-Th 8-5, alt Fri. 8-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand  
Examiner  
Art Unit 3761

November 8, 2007

TATYANA ZALUKAEVA  
SUPERVISORY PRIMARY EXAMINER

